

SHEFFIELD BUILDS RED CROSS HEADQUARTERS

(By H. Fontaine Little.)

Patriotic impulse during the war times takes various forms, which is not confined merely to subscribing for liberty loan bonds, buying war savings stamps, or contributing to the Y. M. C. A., and giving to the Red Cross, in all of which it may be said to the credit of the Sheffield people, response has been both prompt and extremely liberal. But the people of this Alabama city have done something more than that, and the magnificent Red Cross building, which has been erected here, is not merely an exposition of co-operative community spirit, but it truly exemplifies the burning patriotism and supreme loyalty to the American flag, which is the people of this American city. Besides being an inspiring example of community team work, the Red Cross building of Sheffield represents a distinct and unique achievement, and in the annals of American cities it is a crowning glory in the war efforts of Sheffield people and is an adornment to the city itself.

The idea of building a Red Cross house in Sheffield was first conceived by the members of the Sheffield chapter of the American Red Cross society, whose local officers are: John H. Peach, chairman; Mrs. George Burpee, chairman executive committee, and Mrs. Ed. R. Jones, secretary.

Construction work on the building was begun June 14, and through donations of money, materials and labor, its completion represents an expenditure of approximately \$10,000, exclusive of the lot on which it is located, and which is one of the most prominently located and highly valued in this city.

The building is located on the square between Montgomery and Alabama avenues, right in the heart of the city. It has become the "show place" of the city.

Construction of the building was carried on under the supervision and direction of Willis G. Waldo, one of Sheffield's most prominent citizens, an official of the Chamber of Commerce, and a large Red Cross committee, one of the largest construction companies engaged in building nitrate plant No. 2 near this city. The plans and designs were furnished by R. A. Chapman, city engineer of Sheffield, and J. P. Miller, architect of the city.

The building is unique in design and modern in construction. It is finished in light gray tint, dark stained windows, with green shingle roof and a front porch is dignified with four large columns. A large Red Cross emblem hangs from the overhead archway. It is a house of six rooms, each of which was designed for certain purposes. The chimneys are of red tile and the fireplaces are of a wide and rustic design. It is electric-lighting and the main features of the building is the Hoover kitchen, which will be used for demonstration of war dishes, and where committees from city and rural districts will meet in discussion of food conservation, which work devolves upon the best kitchen women workers of this entire section. Mrs. Mary H. Hogan, who fills the responsible position of emergency home demonstration agent of Colbert county. A rest-room is provided for the soldiers of the United States army, who are stationed here for work in the ordnance department at the government nitrate plant. Another room will be used as an office, and others by the local chapter for making hospital garments and surgical dressings, packing and shipping.

For building the Red Cross house here funds were donated by practically every local citizen, many out-of-town visitors and others living in this district. Nearly all of the materials were donated by local business firms. Paints were furnished by the Sheffield Association of Traveling men, and the plumbing work and equipment was donated by the associated plumbers of the city. The Red Cross committee, the large forces of men engaged at the United States nitrate plants, which the government is building here. To these forces much praise is due.

Carpenters, electricians, bricklayers and decorators of the score from the government nitrate plants patriotically donated their labor, and some of them money, and certainly much credit is due them for their services so gratuitously given. Following their day's work at the nitrate plants they worked on the Red Cross building at night, performing their labor under the illuminating rays of numerous electric spot lights, thus exhibiting a courageous spirit and performing a double duty.

These forces of men were in charge of Ted Wright, of the Westinghouse, Church, Kerr company; W. B. Reeves, of the Chemical Construction company, representing nitrate plant No. 2, and Gordon Hood, of the Stone and J. McGuire, of the J. J. White company, of nitrate plant No. 1.

TWENTY CARLOADS OF CHATTANOOGA PRODUCTS A DAY TO MUSCLE SHOALS

There were some who said that Chattanooga is not a city that derives no benefit from the projects at Muscle Shoals.

It develops that about twenty carloads of Chattanooga products go every day to enter into the construction down there.

These carloads of Chattanooga products, Chattanooga bricks, sand, cement, gravel, groceries and machinery.

Who said no benefit?

Wharf Will Be Ready

When the big dam at Muscle Shoals is completed, Chattanooga will be all ready with modern river terminals to meet the influx of river-borne freight which is expected.

Already the city has completed the erection of a three-story brick warehouse, 60x100 feet and costing \$25,000. The city wharf has been paved over with Belgian blocks, a concrete retaining wall has been built and a mechanical conveyor has been installed, the daily handling anything from a bale of cotton down.

The completion of the terminal project calls for the erection of a large traveling crane, the building of a landing pier and the installation of other improvements, giving every facility for the convenient and economical handling of a large volume of traffic. Authorities are proceeding at a rate which will guarantee the completion of the whole terminal system by the time the dam at Muscle Shoals is completed, permitting the resumption of river traffic beyond Sheffield. At the present time the canal along Muscle Shoals is closed because of the work on the dam and traffic is not possible beyond Decatur.

REVOLUTION SOUTHERN INDUSTRY RESULT MUSCLE SHOALS PROJECT

Effect of Development Felt in War and Peace, Touching Every Line of Endeavor.

(By Bruce L. Crabtree.)

The stupendous development now going on at Muscle Shoals, as the tri-cities of Sheffield, Florence and Tuscumbia are more widely known, should be of especial interest to every loyal citizen of Chattanooga. Not only do the projects under way down there have a most potent effect upon the whole nation, but they have a peculiar and direct effect in the advancement of Chattanooga, and in a measure the construction going on is a vindication of the intelligence and vision of Chattanooga citizens.

While it is true that all forward-looking men in the Tennessee river valley have been striving for the accomplishment of the project now being done, it is also true that here in Chattanooga has been the center from which have radiated the influences and enthusiasms which in the beginning had most to do with the general acceptance of the idea. That is treated more fully in the article on the Tennessee River Improvement association and it suffices to say here that in large degree Muscle Shoals is a Chattanooga project.

Project Has Unlimited Possibilities.

To say that the government is now spending \$105,000,000 at Muscle Shoals is the poorest possible way of expressing what is going on. The ramifications and possibilities of the development are such that it rather staggers the imagination to attempt a description.

Scattered over the United States are other projects involving the expenditure of as much money in each case. Shipyards, powder plants, etc., are springing up as by magic, in some measure the change on the face of the earth is as great as at Muscle Shoals, but these other plants are being erected to serve single purposes—purposes which are entirely understood and definite. But the Muscle Shoals project serves many ends, all of the first magnitude of importance, that it comes in a class entirely alone.

To understand that it is first necessary to know just what the project includes. There are now being erected at Muscle Shoals the following:

- One synthetic ammonia plant (plant No. 1).
- One cyanamid plant (plant No. 2).
- One small navigation dam (dam No. 1).
- One large power and navigation dam (dam No. 2).

Two of these are fairly immense undertakings. Plant No. 2 and dam No. 2 represent the superlative in projects of their kind. Dam No. 1 is merely a small dam, the purpose of which is being erected for navigation purposes, and will cost only \$1,000,000, which in comparison with the staggering total is a trifle. Plant No. 1 calls for the expenditure of \$10,000,000, and the balance is divided about equally between the big plant and the big dam.

Dam No. 2 of Titanic Proportions.

When the enormous power dam at the head of Muscle Shoals proper is completed it will present a sight comparable to many natural wonders of the world. It is a dam of such proportions that it is a marvel to the imagination. It is a dam of such proportions that it is a marvel to the imagination. It is a dam of such proportions that it is a marvel to the imagination.

It is not permissible to give proportions and details in regard to plant No. 2, but it is an undertaking fully as large as the construction of the big dam.

Muscle Shoals Affects Development of Many Lines.

At the present time, of course, the chief purpose of the Muscle Shoals project is to win the war, but it stands alone in being the one undertaking which has as valuable peace time uses as war time uses. And it is the nitrogenous element of the air which the Muscle Shoals plants will extract in two ways.

Nitrogen is a selfish sort of element. If, by dint of the expenditure of great electric energy, it is caught in combination with any other element, it is very restless in that combination, and as soon as it is released it is ready to combine with any other element. Thus, if it is caught in a combination where the balance is very delicate, and subjected to a sudden force of great violence, making nitrogen compounds among the most deadly of explosives. Or, if in more stable combination, as in calcium cyanamid, upon exposure to the atmosphere, the nitrogen will come off as ammonia, to the great benefit of any plant life in the vicinity.

And thus the manufacture of nitrogen compounds is seen to be actually what promotes the arts of war and peace alike, and can readily be turned from one to the other—in war to the making of explosives, in peace to the making of fertilizers.

Will Open River to Navigation.

But the effect of the development at Muscle Shoals extends far beyond the limits already mentioned. To manufacture cyanamid products it is absolutely necessary to have great quantities of electric power, and here, too, the rapid fall of the Tennessee river at

Muscle Shoals was the only potential source of enough power was the reason for locating the plant at the tri-cities. Incidentally, but quite happily, nevertheless, the construction of a dam sufficiently high to produce the desired power will also entirely obliterate the barrier of the shoals, and with the addition of a few more dams, already in sight, the Tennessee river will be open to navigation the year round all the way to the junction with the Ohio, which of course means also to the Gulf of Mexico.

The results of securing navigation are too well known to need great elaboration here. But the completion of the improvement of the river is regarded as the final touch to finish the preparation of this section for an industrial development which will revolutionize existing conditions.

The effect does not stop here. There will be quite a surplus of power generated by the big dam and dam No. 2, when that is completed, and somebody is going to use that power. Much of it may come to Chattanooga, much of it will be used elsewhere, but when the presence of that power is considered in connection with the presence of the coal, iron and other minerals in the section, it can be readily understood that the Tennessee river valley is destined to become one of the greatest electrical and metallurgical centers in the world. All factors conducive to producing such a center will combine—power, cheap and abundant raw material, good labor supply, and the choice of river or rail transportation.

Marks the Realization of Science's Fancied Dream.

What is happening down at Muscle Shoals marks the realization of one of the fondest dreams of science. Theoretically it has been known for years that the nitrogen of the air might be extracted and combined with other elements to produce such things as ammonia, which has been produced upon a commercial scale, in Germany, in Sweden and at Niagara Falls. Cyanamid plants have been in successful operation, but still the bulk of nitrogen in this country came from the Chilean deposits. The construction of the Muscle Shoals plants marks the final emancipation of America from dependence upon this source of supply and guarantees that there shall be no future danger of a nitrate shortage, whatever the need.

Two Processes Side by Side.

In addition to the cyanamid process, which is proven, there are numbers of other processes for extraction of nitrogen from the air. The synthetic ammonia processes will be tried out side by side, the former at plant No. 2 and the latter at the smaller plant. At plant No. 2 the nitrogen is extracted by the use of a platinum sponge. The sponge is supposed to combine directly to form ammonia gas, and here comes the beauty of the whole business. If it is desired to produce munitions the gas is bubbled through nitric acid to form ammonium nitrate, which can be dissolved in water and shipped to munitions plants in tank cars, or if the country is at peace, the same vat can be filled with water, and the ammonia is bubbled through the result is fertilizer.

The cyanamid process, to be employed at plant No. 2, involves a great deal of labor. The process involves first the manufacture of calcium carbide from limestone and coke in an electric furnace, and the subsequent passage of nitrogen through the carbide, and here again heated in the furnace. The hot carbide greedily absorbs the nitrogen, and the resulting compound of calcium cyanamid is well known and of great merit.

To use the cyanamid process means that the plant, to be self-contained, must include a by-product coke oven to produce the coke, and a gas holder for the carbide, and here again is set up a trail of by-products which leads into an infinite number of uses.

Differs Also in Proportion to Location.

In the case of the powder plant at Nashville (and other undertakings over the country) the project, while of enormous size, has been situated close to a fairly large city, where there was at least a measure of existing facilities for housing labor. At Muscle Shoals the human necessities had to be largely created out of nothingness before the real work could begin, and it was not until the workers of the job were put to the necessity of building during the day barracks they were to sleep in that night.

Under these conditions the vast cantonment for workers at plant No. 2, covering four square miles with compact buildings, has been built since Dec. 25, an achievement which is even more difficult to believe after most what has been done. To the casual observer the work at this place appears to be about as large as all the work done at Chickamauga park since the beginning of the war, and the construction of the permanent plant has just begun, the work which has been accomplished having been almost entirely devoted to the erection of cantonments for the labor.

TENNESSEE RIVER IMPROVEMENT ASSOCIATION MAKES HOME HERE

Movement Started in Chattanooga Has Culminated in Great Developments Now Under Way at Muscle Shoals—Fight Won After Long Educational Campaign—Meets Here in November.

The world is full of cities which have most active civic bodies dedicated to the purpose of accomplishing the interests of those cities themselves, but Chattanooga is one of the few communities, if not the only one, which is the home of an organization having for its purpose the immediate development of a section 150 miles distant.

That organization is the Tennessee River Improvement association, an entirely Chattanooga body in inception and spirit. The annual meetings of the association have always been held in Chattanooga, the roll call of its membership provokes the roll of a war, and the convention of the leaders in Chattanooga business life, and yet the object of that association has been for a number of years the securing of the river to Chattanooga, not under way, not for Chattanooga, but for Muscle Shoals.

Of course that object has been but a part of the larger scheme, calling for the development of the power and navigation resources of the Tennessee

NITRATE PRODUCTION BRINGS SOUTH'S GREAT OPPORTUNITY

World Will Turn to This Section for Replacement of Vanished Food Reserves—Southern Farmers Will Have First Chance and All Industry Will Hum.

With the completion of the nitrate project at Muscle Shoals and the coming of peace so that the enormous output of nitrogen compounds may be turned from explosives to fertilizers, a new era will dawn for southern agriculture, and it will be a rare farmer indeed who is not enabled to sufficiently increase his income to make envious his city brother.

This will be true for a number of reasons, first among which is the fact that the greatest nitrogen producing center in the world will be located in the south, and therefore the southern farmer will have an appreciable advantage in freight rates in securing this fertilizer, which will do so much for the transformation of southern farming.

Another reason is that the stupendous nature of the undertaking at Muscle Shoals has appealed to the sense of the spectacular and has thereby done more to advertise the efficiency of nitrogen fertilizers than thousands of tons of printed matter could have done otherwise, and agriculturists will be awake to the necessity of nitrogen and phosphorus addition to soils, and eager to obtain these elements when the transition from explosives to fertilizers comes.

What Nitrogen Does for Cotton.

To go into the multitudinous ramifications of nitrogen fertilization would require most of this edition. A few striking examples must therefore suffice.

It is granted that for some time yet cotton will be the chief source of revenue to the southern farmer, though the propaganda for crop diversification is bearing excellent fruit. Here are the results of tests conducted in lands typical of the main cotton lands of the south:

The fertilizer used contained 7 per cent. of available phosphoric acid and 2½ per cent. each of nitrogen and potash. Using 1,000 pounds per acre the yield was increased 700 per cent. and the profit, after paying for the fertilizer, \$3.68 per 100 pounds.

These figures, applied to the total production of the south, would give a result fairly staggering and almost beyond belief.

Take corn, another staple of the south: Experiments show that for every \$1 invested in fertilizer a profit of \$1.24 is gained.

Other crops respond in like fashion. With the generous application of nitrogen fertilizer, which will come after the war, can the prosperity of this section be doubted, with agriculture admittedly the foundation upon which the whole industrial structure rests?

Why Nitrogen Is So Important.

Without fixed nitrogen the world would soon become an uninhabitable waste. The food supply of the world depends upon it as nitrogen enters into the composition of every organic substance. It composes four-fifths of the atmosphere and the amount above only one square mile of the earth's surface is enough to supply the whole world for the next fifty years, so that the supply is practically inexhaustible, even in the face of the most improved methods of atmospheric fixation.

It is conceded by eminent authorities that an adequate supply of nitrogenous fertilizer will so increase the yield of farm products that the present food problem of civilization will be advanced far into the next century.

AMBITIOUS PROGRAM COMMUNITY BETTERMENT FOR MUSCLE SHOALS

Officials of Tri-Cities, Government Director and Community Service Expert Plan to Make Garden Spot and to Provide Highest Class Recreation and Educational Facilities.

By this time nearly everybody is familiar with the activities of the war camp community service, that organization operating under the Foodstuffs Administration, which has to do with community development and relations in centers where there are army or navy cantonments. But it is not generally so well understood that there is another commission, having in a measure parallel functions, which operates in those communities where large industrial operations of a war nature are taking place.

This commission is in reality a part of the ordnance department, being known as the industrial service section.

For several weeks past Joseph L. Bowles, Jr., attached to this section, has been at Muscle Shoals, planning with the construction authorities and the leading citizens, a course of action to best take care of the enormous expansion which has taken place in the three cities of Florence, Sheffield and Tuscumbia, which has to do with twenty thousand people, composed of the workmen and their families. This is an expansion of considerably over 100 per cent. and has of course created a number of acute problems.

Mr. Bowles, who is supervisor of community work for the southern states, has had a wide and lengthy experience in civic work, and comes peculiarly fitted to undertake the work ahead upon the basis of the heartiest and most intelligent cooperation on the part of the local leaders.

Comprehensive Program Mapped Out.

The movement took definite form at a meeting held at Muscle Shoals on July 25, when the organization of the Tri-Cities committee was perfected at a meeting of the committee at Florence, in the chamber of commerce quarters. Representatives of the commercial organizations in Florence, Sheffield and Tuscumbia attended the meeting, which was a very enthusiastic one. A definite program of work was agreed upon by the committee. W. H. Mitchell, president of the Florence chamber of commerce and chairman of the Tri-Cities committee, presided.

The definite program, which is a most constructive one, agreed on by the committee includes:

1. The appointment of committees in the three communities to investigate specific cases of alleged profiteering.
2. The provision of adequate and diversified amusement and recreation in each community, including community center huts with reading and bureau, a paid and capable band to be alternately engaged in the Tri-Cities; the inauguration of a community swim idea in each city; provision of swimming facilities and bath houses; thorough installation of playground equipment in each of the beautiful parks in the three cities; and the setting aside of additional tracts for beauty spots and additional parks; the greater use of the libraries through an agreement which would permit of their being available for visitation every afternoon.
3. The organizing of the business men through the respective chambers of commerce and the securing of aid services for those sections in each of the three communities.
4. The establishment of community markets for the purpose of encouraging the farmers to raise more produce than they are now able to sell, and the planting of war gardens in the district.
5. The provision of adequate sew-

Realized Value of Cyanamid Process.

The Tennessee River Improvement association was among the first organizations in the country to grasp the possibilities of the electric extraction of nitrogen from the air. The double-barreled nature of the device, namely, that the extraction of nitrogen was quickly realized, and the association cleverly spread the propaganda. It was realized that the cyanamid process was the one thing that would fit into the plan to provide navigation to the steamboats and fertilizer to the farmers, and which could be turned to the manufacture of explosives in wartime. The erection of a nitrate plant would not only provide navigation to the steamboats and fertilizer to the farmers, but would remove the bar at Muscle Shoals. In addition, in peace times, the manufacture of cyanamid would bring an immediate financial return upon the investment in the dam, besides furnishing agriculture with one of the most desperately needed elements for fertilization.

It was further realized that the only location in the United States which would generate enough power was the Tennessee river at Muscle Shoals. All of these elements of the situation, the need, the opportunity and the logical fact that it became merely a matter of educating the public to guarantee the general appreciation of that logic. To this end the association dedicated itself, and under the leadership of Mr. Patten, of Chattanooga; Col. Worthington and Mr. Ashcraft and others, of Muscle Shoals; C. H. Huston, of Chattanooga, and many others of the Tennessee valley, the good fight was begun.

So effectively was it waged that by the time war was declared Muscle Shoals had become fixed in the minds of the public and of congress as the source of nitrogen for the nation. The war came along to make its imperative demand for explosives and to hasten the decision—the association had rendered it next to impossible to consider anything but the location of the greatest bar to navigation in the Tennessee river is now in process of removal, and the final end of securing all-the-year-round navigation of the Tennessee river length is in sight.

It is true that there will have to be some more work done to really complete the opening of the river. The big dam at Muscle Shoals only eliminates the shoals and gives slack water for about forty miles above, but the erection of that dam had been the great obstacle. With that completed, the cost of finishing the river to the Gulf of Mexico would be neither rhyme nor reason in not completing it, and the great interest which the Muscle Shoals development has stirred up over the country will be the most powerful factor demanding the continuance of the work.

History of the Association.

The Tennessee River Improvement association was founded in 1895 with the famed Gen. Wilder as its first president.

The project of improving the Tennessee river appealed most strongly to the imagination and sympathies of John A. Patten, and in the earlier years of the association's activities he was the most enthusiastic of all its members. All up and down the Tennessee river valley his name has been known as the best friend of river improvement and therefore as one of the best friends of the community, and whenever the subject is mentioned in any of the river towns there is some group of men who will tell you that it was John A. Patten, throughout the history of the association the Chattanooga spirit has been strongly in evidence and the roster of its successive presidents reads like a roll call of local business and civic leaders.

Present officers and committees of the association are:

- C. D. Mitchell, president.
- C. W. Ashcraft, Florence, Ala., first vice-president.
- J. J. Crumbliss, Knoxville, Tenn., second vice-president.
- John W. Bayless, Athens, Tenn., third vice-president.
- C. E. Taylor, Chattanooga, fourth vice-president.
- C. H. Huston, Chattanooga, treasurer.
- Frederick Giddings, secretary.
- Director Vice Presidents—A. J. Hull, Bridgeport, Ala.; A. F. Rehman, Courtland, Ala.; B. G. McKenzie, Dayton, Tenn.; S. S. Broadus, Decatur, Ala.; H. A. Bradshaw, Florence, Ala.; H. C. Henderson, Greenville, Ala.; Henry Henderson, Harriman, Tenn.; T. W. Pratt, Huntsville, Ala.; E. A. Wyatt, Kingston, Tenn.; Samuel Blackwell, New Decatur, Ala.; James Koger, Paducah, Ky.; J. P. Tarwater, Rockwood, Tenn.; E. B. Brown, Scottsboro, Ala.; J. S. Andrews, Sheffield, Ala.; W. H. Wilson, South Pittsburg, Tenn.; John D. Ratcher, Tuscumbia, Ala.
- Executive Committee—J. H. Nathan, Sheffield, Ala.; W. E. Brock, Chattanooga, Tenn.; C. E. Hendricks, Harriman, Tenn.; Henry A. Skeggs, Decatur, Ala.; William Rule, Knoxville, Tenn.
- Advisory Committee—J. W. Worthington, Sheffield, Ala.; C. H. Huston, C. E. Buck, Chattanooga, Tenn.
- Finance Committee—John Stagmaster, Chattanooga, chairman.

MUSCLE SHOALS DAM NOT A RECENT PROJECT

The subject of river improvement at Muscle Shoals can hardly be termed a development of recent years, as witness this advertisement from the Florence Gazette of Oct. 20, 1932:

Look at This.
"Five hundred laborers wanted immediately, to work on the Muscle Shoals canal, at the mouth of Shoal creek. Blue Water, and at Taylor's Bluffs—to whom the highest wages will be given, in cash. We will hire 300 blacks, by the year or month, as may suit the inclination or convenience of the planters. The fare is good, and every effort will be made to render the situation of laborers comfortable and agreeable."

"N. B.—There have been over two hundred men engaged upon the canal during the summer months, and for that time but little sickness and only two deaths."

H. & K."

Government Officials Included.

The following evening this committee met and was expanded into the Muscle Shoals district committee, through the addition of officers and officials upon the government operations. The meeting was presided over by W. H. Mitchell, president of the Florence chamber of commerce, who was elected president of the committee and who outlined its purposes.

Following the meeting, a presentation of the purposes of the committee, each government official was called on to express his views on the idea of forming a joint organization which would take the nature of a clearing house for all matters pertaining to community or governmental matters, and thus form a point of contact between all the interests involved.

The formation of the Muscle Shoals District committee, whose personnel will include both community and government representatives, is just another step in the direction of carrying forward the co-operation which this entire movement reflects.

The program mapped out at the July 26 meeting is now in process of being worked out to the most rapid conclusion.

MUSCLE SHOALS HEALTH CONDITIONS EXCELLENT

U. S. Public Health Service and Local Authorities Work Together.

When it was decided to locate the two nitrate plants and the big dam at Muscle Shoals, the tri-cities of Florence, Tuscumbia and Sheffield together had a population of about 15,000 population. In six months it more than doubled, and doubled at a time when it was almost impossible to secure building material or to get other than labor for the government project proper. So of course a number of the most pressing sanitary problems arose, and it is to the greatest credit not only of the United States public health service, but of the local citizens and officials, that there has not been the slightest trace of infectious disease prevalent in the section.

The United States public health service has been very much on the job ever since. The work of the service was started off by Dr. L. L. Lumsden, and has been carried on under the direction of Dr. H. S. Mustard, by a really enormous force.

Included in that force are eight physicians, three sanitary engineers, two food inspectors, two sanitary inspectors, four sanitary inspectors, eight nurses and about 200 laborers.

The Muscle Shoals sanitary district includes the three towns, the two big plant areas, the cantonment, and camps of the various subcontractors—some ninety square miles in all.

Organization of the district and its relation to the community follows the plan of the United States public health service, such as embraces Chattanooga, but the problems and methods necessarily differ considerably from those employed here.

For instance, there is not a large population here living in tents, but at Muscle Shoals there are numbers of tent colonies.

For instance, there must have sanitary closets, must be screened with 16-mesh wire, have a garbage can, must be floored, and must have a line upon which to dry clothes. These last two provisions are enforced upon the tent colonies, and the grounds upon the theory that to omit them would breed carelessness in habits of living, which would soon drift into insanitary habits.

When it comes to the public health service, got on the job there were 3,300 sanitary closets in use, and now, in midsummer, in a country naturally productive of such insects, there is not a single tent colony. The freedom from mosquitoes comes as a grateful surprise to many who have stayed in other towns in the Tennessee river valley and were fought the pests throughout the long hot summer.

Force Prompt Compliance With Instructions.

At Muscle Shoals the public health service has a weapon which is so effectively in cantonment centers such as Chattanooga. Here, when a restaurant keeper refuses to comply with regulations a provost guard may be sent to enforce the law, and the violator is not only prohibited from selling to soldiers, but is most unpleasantly advertised as keeping an insanitary place. Down there, reliance is placed upon the plan of the United States public health service, and to secure the results needed, prompt response to instructions has been demanded from the plant and cantonment officials, and court action follows the end of those five days in every case.

Differs From Urban Problems.

Conditions are changed in a number of other ways from what they would be in large cities—in the matter of milk, for instance. In the large cities there is a dairy industry of magnitude, but at Muscle Shoals it was necessary to advertise the fact that the violator would be prosecuted, which would disrupt the existing industry, which was strained to the limit to meet the increased demand put upon it, so that the situation would tend to discourage the keeping of cows, and the marketing of milk were not put in force. Instead an education campaign upon home pasteurization was undertaken, and carried through to such an excellent conclusion that in the first part of August there were only four business compels them to be on the road, cases of typhoid in the zone.

GREAT WALL MILE LONG, ONE HUNDRED AND FOUR FEET HIGH

On Aug. 8, an event took place at Muscle Shoals which was of national importance. The first shovel of dirt was officially dug to start the construction of the great dam across the Tennessee river, a mile or two above the Florence-Sheffield bridge. This dam, when completed, will not only be the greatest hydroelectric unit in the world, but it will remove the most troublesome bar to all-year navigation of the Tennessee river. The beginning of work down there marks the consummation of half a century of hopes, and was fittingly celebrated in Florence.

Though the 8th saw the official beginning of work, much has already been accomplished towards the task to be completed in 1932. A force of 200 men has been on the job for some weeks, and already the coffer dam is well along towards completion. The river is closed to navigation across the site of the dam and will remain so until its completion.

Mr. D. A. Watts is engineer in charge, and with his force of assistants and draughtsmen occupies the federal building at Florence and two

bia, J. T. Kirk, John F. Funk and W. M. Goldan.

War Garden Committee—(Florence) was garden committee combined with Community Market committee. Sheffield, Mrs. Mary H. Hogan and Frances Blackwell; Tuscumbia, Dr. H. S. Gregory, G. M. Drisdale and Jno. W. Davis.

Information Bureau Committee—(Florence) already provided with information bureau.) Sheffield, W. E. Sanford, E. A. Robertson, Dr. H. R. Thompson and H. R. Hill; Tuscumbia, John Shefferd, John Johnson, J. B. Hurston, Jr., and City Beautiful.

Government Officials Included. The following evening this committee met and was expanded into the Muscle Shoals district committee, through the addition of officers and officials upon the government operations. The meeting was presided over by W. H. Mitchell, president of the Florence chamber of commerce, who was elected president of the committee and who outlined its purposes.

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The formation of the Muscle Shoals District committee, whose personnel will include both community and government representatives, is just another step in the direction of carrying forward the co-operation which this entire movement reflects.

The program mapped out at the July 26 meeting is now in process of being worked out to the most rapid conclusion.

When it was decided to locate the two nitrate plants and the big dam at Muscle Shoals, the tri-cities of Florence, Tuscumbia and Sheffield together had a population of about 15,000 population. In six months it more than doubled, and doubled at a time when it was almost impossible to secure building material or to get other than labor for the government project proper. So of course a number of the most pressing sanitary problems arose, and it is to the greatest credit not only of the United States public health service, but of the local citizens and officials, that there has not been the slightest trace of infectious disease prevalent in the section.

The United States public health service has been very much on the job ever since. The work of the service was started off by Dr. L. L. Lumsden, and has been carried on under the direction of Dr. H. S. Mustard, by a really enormous force.

Included in that force are eight physicians, three sanitary engineers, two food inspectors, two sanitary inspectors, four sanitary inspectors, eight nurses and about 200 laborers.

The Muscle Shoals sanitary district includes the three towns, the two big plant areas, the cantonment, and camps of the various subcontractors—some ninety square miles in all.

Organization of the district and its relation to the community follows the plan of the United States public health service, such as embraces Chattanooga, but the problems and methods necessarily differ considerably from those employed here.

For instance